

dlist Reference Manual

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Chapter 1

dlist File Index

1.1 dlist File List

Here is a list of all documented files with brief descriptions:

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Chapter 2

dlist File Documentation

2.1 dlist.h File Reference

Functions

- dlist **dlist_new_list** (void)
- dlist **dlist_new_list_bytype** (int type)
- void **dlist_delete_list** (dlist lst)
- void **dlist_delete_list_butnotdata** (dlist lst)
- int **dlist_set_destroyer** (dlist lst, void(*destroyer)(void *))
- int **dlist_add_first_element** (dlist lst, void *element)
- int **dlist_add_element** (dlist lst, void *element)
- int **dlist_add_last_element** (dlist lst, void *element)
- void * **dlist_get_first_element** (dlist lst)
- void * **dlist_see_element** (dlist lst)
- int **dlist_set_compare** (dlist lst, int(*compare)(void *, void *))
- int **dlist_add_element_inorder** (dlist lst, void *element)
- int **dlist_remove_element** (dlist lst, const void *element)
- void * **dlist_get_element_byposition** (dlist lst, int pos)
- void * **dlist_see_element_byposition** (dlist lst, int pos)
- int **dlist_count_elements** (dlist lst)
- int **dlist_add_element_inorder_fromtheend** (dlist lst, void *element)
- int **dlist_element_inlist** (dlist lst, void *element)
- dlist **dlist_copy** (dlist lst)

2.1.1 Detailed Description

2.1.2 Function Documentation

2.1.2.1 int dlist_add_element (dlist *lst*, void * *element*)

Adds a new element to a list

2.1.2.2 int dlist_add_element_inorder (dlist *lst*, void * *element*)

Adds a new element keeping the order in the list imposed by the comparer function

2.1.2.3 int dlist_add_element_inorder_fromtheend (dlist *lst*, void * *element*)

Adds a new element to an ordered list. It starts the search from the end of the list. The list must be of type DLIST_TYPE_DOUBLE.

2.1.2.4 int dlist_add_first_element (dlist *lst*, void * *element*)

Adds a new element in the first position of the list

2.1.2.5 int dlist_add_last_element (dlist *lst*, void * *element*)

Adds a new element in the last position of the list

2.1.2.6 dlist dlist_copy (dlist *lst*)

Creates a new list with the same elements. The data of the elements is not duplicated but now is kept in both lists simultaneously.

2.1.2.7 int dlist_count_elements (dlist *lst*)

Returns the number of elements in the list

2.1.2.8 void dlist_delete_list (dlist *lst*)

Destroys a list

2.1.2.9 void dlist_delete_list_butnotdata (dlist *lst*)

Destroys a list but it does not destroy the data in each list member

2.1.2.10 int dlist_element_inlist (dlist *lst*, void * *element*)

Check whether an element is in a list or not. Returns 1 if the element is in the list and 0 if it is not. Returns 0 in case of error. It uses the "compare" function in order to decide whether the argument is equal or not to a list element.

2.1.2.11 void* dlist_get_element_byposition (dlist *lst*, int *pos*)

Returns the element from the list that is in "pos" position. The positions are numbered starting by 1. It also removes the element from the list.

2.1.2.12 void* dlist_get_first_element (dlist *lst*)

Returns the data in the first element of the list and removes it from the list

2.1.2.13 dlist dlist_new_list (void)

Creates a new empty list with "free" as element destroyer and no comparer function

2.1.2.14 dlist dlist_new_list_bytype (int *type*)

Creates a new empty list from an specific type, using "free" as the destroyer and no comparer function

2.1.2.15 int dlist_remove_element (dlist *lst*, const void * *element*)

Removes an element from a list. The element is not modified.

2.1.2.16 void* dlist_peek_element (dlist *lst*)

Returns the data in the first element but does not remove it (nor makes a copy of the data). If the parameter *lst* is NULL then it returns the next element in the same list. Can not be used to scan two lists simultaneously.

2.1.2.17 void* dlist_peek_element_byposition (dlist *lst*, int *pos*)

Returns the element from the list that is in "pos" position. The positions are numbered starting by 1. It does not remove the element from the list.

2.1.2.18 int dlist_set_compare (dlist *lst*, int(*)(void *, void *) *compare*)

Sets the function used to compare two list elements. The function should return a value greater than 0 if the first argument is greater than the second one. This way, the list could be order from greater to lesser. If the function returns a value lesser than 0 when the first element is smaller than the second one then the list will keep an order from lesser to greater. The function should return 0 if both element are equal. This will be use in order to check whether an element is or not in a list (see **dlist_element_inlist()**(p. 4))

2.1.2.19 int dlist_set_destroyer (dlist *lst*, void(*)(void *) *destroyer*)

Set the function that will be used in order to free the memory used by any list element

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